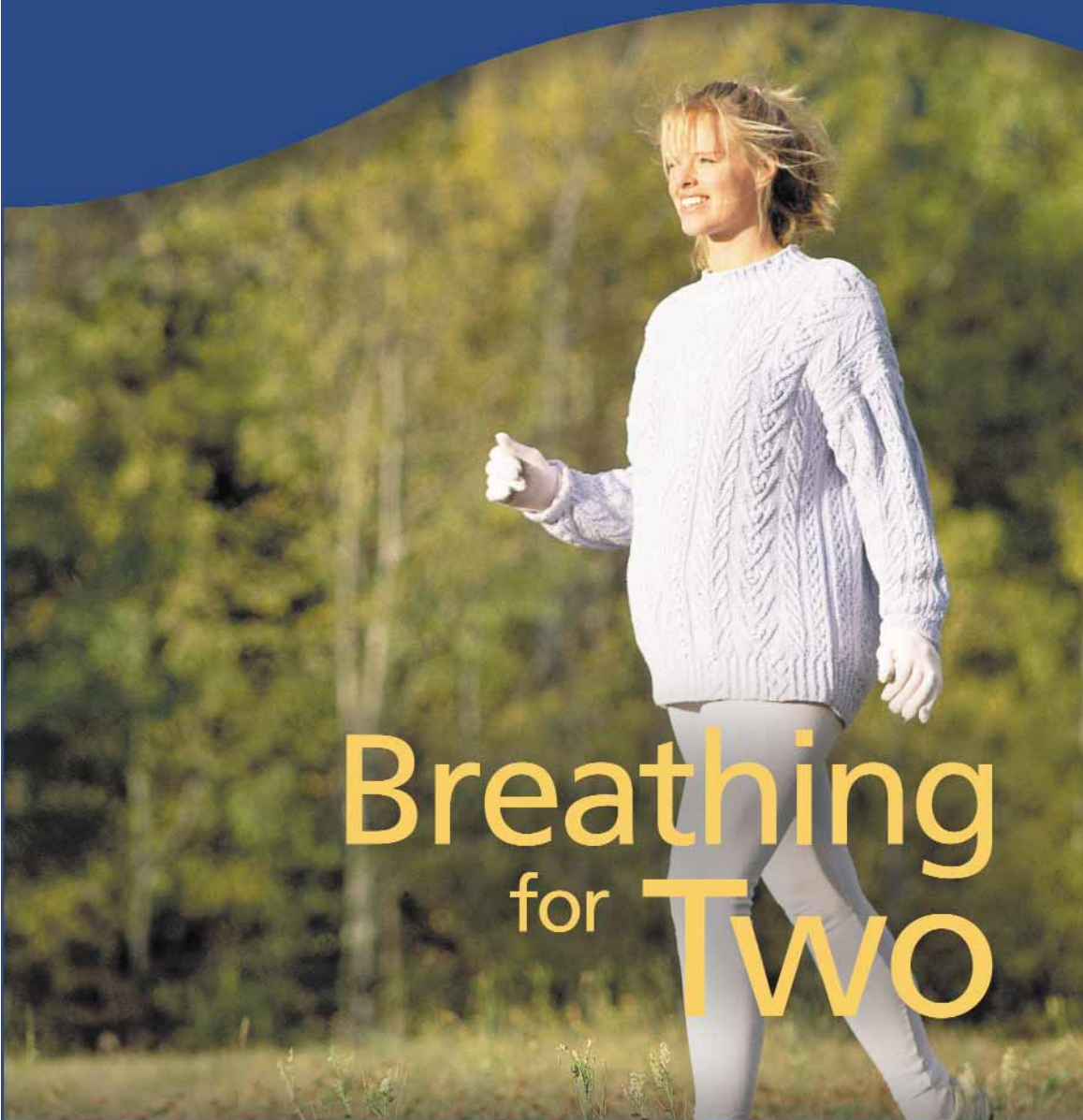




Allergy & Asthma Network

Mothers of Asthmatics



Breathing for Two

A Guide to Asthma During Pregnancy



800.878.4403
www.breatherville.org

Authors:

James P. Kemp, MD
Clinical Professor of Pediatrics
Division of Immunology and Allergy
University of California San Diego

Michael Schatz, MD
Chief of the Department of Allergy
Kaiser-Permanente Medical Center, San Diego

Nancy Sander
President and Founder
Allergy & Asthma Network Mothers of Asthmatics

Christy Olson, RN
AANMA's Ask Nurse Christy
Allergy & Asthma Network Mothers of Asthmatics
www.breatherville.org
Toll Free 866.227.2934



Sponsored by an unrestricted
educational grant from AstraZeneca



[www.aaaai.org/patients/allergic_conditions/
pregnancy_asthma.stm](http://www.aaaai.org/patients/allergic_conditions/pregnancy_asthma.stm)



www.asthmaeducators.org

Endorsed by the American Academy of Allergy, Asthma & Immunology
and the Association of Asthma Educators

Breathing for Two: A Guide to Asthma During Pregnancy is published by
Allergy & Asthma Network Mothers of Asthmatics (AANMA) Copyright 2003. All rights reserved.

AANMA02/2003-E-0001-92K



Breathing for Two

A tiny new life somersaults inside. Filled with hopes and dreams for your baby's healthy future, you watch what you eat and drink. You get plenty of rest and exercise.

However, for many expectant mothers, asthma — one of the most common complications of pregnancy — presents special challenges.

While asthma is a serious, potentially life-threatening condition, you can enjoy a healthy pregnancy and delivery. The key to remember is you are breathing for two.

How does asthma affect pregnancy?
How does pregnancy affect asthma?
How will asthma and asthma medications affect your unborn child?

Breathing for Two: A Guide to Asthma During Pregnancy helps answer these important questions.



Sharing the Air

Healthy breathing is vital to a healthy pregnancy! Your unborn baby depends on you for a constantly fresh air supply. Your asthma symptoms such as coughing, wheezing, shortness of breath, or gasping for air are signs that your baby's air supply may not be as good as needed.

Even when you are not having symptoms, it is possible to have unhealthy breathing levels. Check breathing levels at home each day using a handheld peak flow meter and at asthma care appointments using a spirometer. Seek expert obstetric and asthma care throughout pregnancy.

What is Asthma?

Asthma is a condition known to narrow the airways in your lungs in two important ways.

Bronchospasm (bronk-oh-spaz-em) occurs when the muscles surrounding the airways (bronchial tubes) tighten. Symptoms include coughing, wheezing, and shortness of breath.

Airway inflammation is the silently smoldering part of asthma you can't feel, hear, or see. Irritated, inflamed airways swell, leak fluid, and become narrowed.

Asthma can decrease blood oxygen levels for both mother and baby.



Check breathing levels at home each day using a handheld peak flow meter and at asthma care appointments using a spirometer.

You and your developing baby require a fresh and constant air supply for a healthy pregnancy.

Setting Goals for Baby and You

- Healthy breathing levels at all times
- No nighttime coughing or wheezing
- No hospital or emergency visits due to asthma symptoms
- Ability to exercise, go to work, enjoy hobbies, and take care of your home and family without symptoms
- Healthy indoor air environments
- Using the least amount of medication required (as prescribed) to prevent symptoms
- Delivering a happy, healthy baby!

*The more you
learn about asthma
and allergies, the more
power you'll have
over symptoms!*

You and your developing baby require a fresh and constant air supply for a healthy pregnancy. The only way to supply oxygen to the body is to breathe it deeply into your airways where it is distributed to vital life organs and your baby.

Asthma often runs in families. Asthma symptoms are often triggered by irritants (such as cigarette smoke, cleaning products, or fumes), allergens (animal dander, mold, dust mites, and others), and viral or bacterial infections.

The good news is that asthma symptoms can be treated and, in most cases, prevented during pregnancy. You will need a written asthma management plan. Avoid or remove allergens and irritants from your home and workplace. Use medications as prescribed.

How Asthma Affects Pregnancy

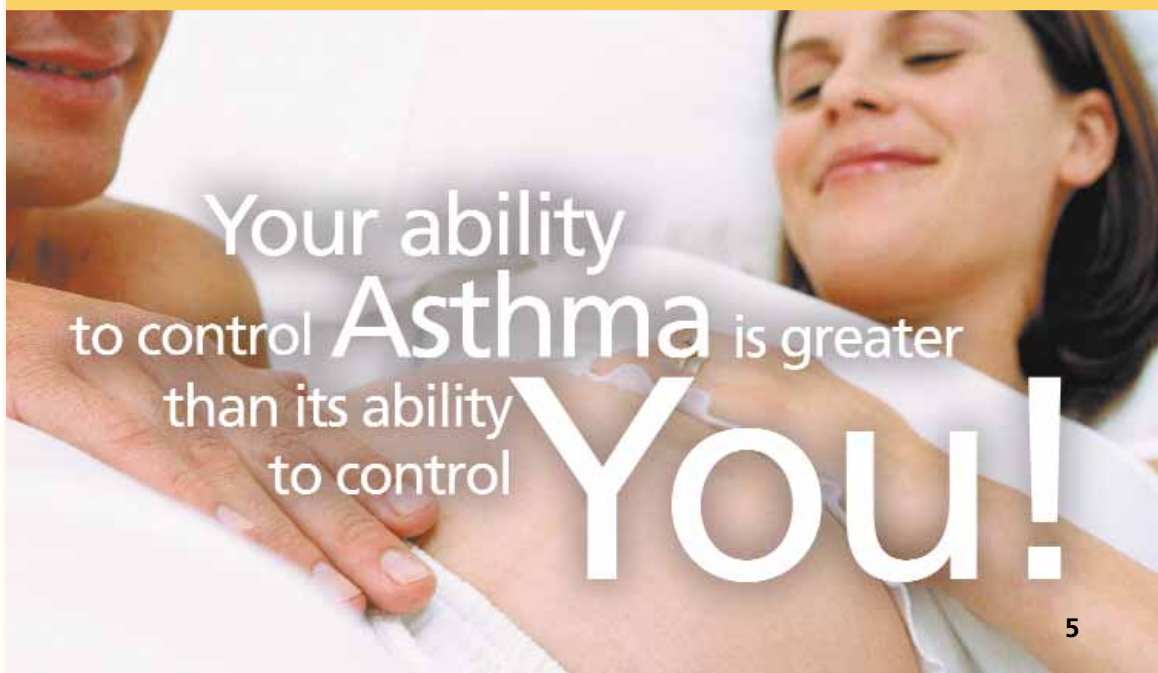
Asthma symptoms caused by bronchospasm and underlying inflammation can signal lower breathing (and blood oxygen) levels for both mother and baby.

When asthma symptoms are ignored or left untreated, expectant mothers are at increased risk of pre-eclampsia (a group of symptoms including high blood pressure, ankle swelling, and kidney problems that may compromise the growth and health of the baby and progress to seizures and other serious consequences), excessive vomiting, vaginal bleeding, and premature and complicated labor.

For the unborn child, poorly controlled asthma symptoms can cause slowed growth, preterm birth, low birth weight, low oxygen levels at birth, and even loss of life.



The good news is that asthma symptoms can be treated and, in most cases, prevented during pregnancy.





Learn the difference between breathing changes due to pregnancy and symptoms of asthma.

How Pregnancy Affects Asthma

There is no way to predict how pregnancy will affect your asthma symptoms. Expectant mothers find that asthma symptoms improve, worsen, or remain the same during pregnancy. As pregnancy progresses, there is less room inside your body to take a full, deep breath. Normal activities such as climbing stairs may leave you short of breath, but they should not make you cough, wheeze, or experience lower breathing levels. (Use a handheld peak flow meter to check.)

Learn the difference between breathing changes due to pregnancy and symptoms of asthma. If breathing symptoms improve after using your *bronchodilator* inhaler, symptoms are most likely due to asthma and should be reported immediately to your physician or other healthcare provider.

Asthma Medications During Pregnancy

Many expectant mothers steer clear of all asthma or allergy medications, fearing harm may come to their unborn child.

However, the risks to both mother and baby associated with poorly controlled asthma are greater than the risks of taking asthma medications as prescribed.

The goal is to use medications to prevent inflammation and to treat bronchospasm when symptoms first begin. This approach minimizes risks and maximizes benefits to both mother and child.

The goal is to use medications to prevent inflammation and to treat bronchospasm when symptoms first begin.

About Medication Safety

The U.S. Food and Drug Administration (FDA) classifies medications for use during pregnancy in categories A-D and X. Most asthma medications fall into category C and can be used during pregnancy when the benefits outweigh the potential risks.

Inhaled budesonide is the only inhaled corticosteroid to receive category B status, meaning “there is no evidence of harm to the fetus.”

Many medications sold with or without a prescription can be used during pregnancy *under physician supervision* whereas a few others are known to be unsafe.

Herbal and dietary supplements are not well studied in expectant mothers and should not be used without supervision from a physician or other healthcare provider.

Before using any medication or supplements, discuss benefits and risks with your physician or other healthcare provider.



Asthma experts recommend using inhaled, rather than oral, medications during pregnancy. Inhaled medications go directly to the airways, so patients can take smaller doses to relieve or prevent symptoms.

Inhaled Bronchodilators

(albuterol, formoterol, levalbuterol, pirbuterol, and salmeterol)

Inhaled bronchodilators treat the part of asthma you can feel, hear, and see – coughing, wheezing, and shortness of breath. Bronchodilators do not treat airway inflammation. You should feel breathing levels improve when using a bronchodilator.

If you need to use a bronchodilator to treat noisy symptoms more than twice a week (other than to prevent exercise-induced asthma), your asthma may not be under optimal control. Call your asthma specialist to adjust your treatment routine.

Using less medication than prescribed may prolong symptoms. Using more medication may produce unwanted side effects.

Medication Brand Name _____

Dose _____ When to take it _____

Should feel symptoms respond within _____ minutes

Expect symptom control for _____ hours

Potential side effects include _____

Call OB/GYN if _____

Call asthma specialist if _____

Inhaled Corticosteroids

(beclomethasone, budesonide, flunisolide, fluticasone, and triamcinolone)

Inhaled corticosteroids treat inflammation, the part of asthma you cannot feel, hear, or see. You will not feel breathing levels improve right away. However, just like brushing your teeth prevents cavities, using inhaled corticosteroids prevents airway inflammation.

Studies show that daily use of inhaled corticosteroids reduces the number of symptom days, hospitalizations, and emergency department visits.

The two most commonly prescribed classes of inhaled medications used in pregnancy are bronchodilators and corticosteroids.

Medication Brand Name _____

Dose _____ **When to take it** _____

What to expect _____

Potential side effects _____

Side effects of inhaled corticosteroids are usually limited to mild throat irritation or hoarseness. Rinsing your mouth after each use can reduce these symptoms.

Using less medication than prescribed may prolong symptoms. Using more medication may produce unwanted side effects.



Inhaling Your Medications Correctly



*Metered-Dose Inhaler
with holding chamber*

Inhaled medications will not work if not inhaled correctly!

Ask your physician or other healthcare provider and nurse educator to check your inhalation technique at each visit.

Metered-Dose Inhalers (MDIs):

Begin a slow, deep breath a split second before pressing the MDI. When it's not possible to inhale more deeply, hold your breath, count to 10, and slowly release your breath. Repeat the process for each puff prescribed.

If you feel the medication on your tongue, cheeks, or throat, use a holding chamber or spacer to improve the amount of medication that reaches your airways.

Don't run out of medication! Use only the number of doses listed on the canister even if it is not empty. Contents remaining beyond this point may include propellants (aerosol gases), but little or no medication. If you have not used your MDI for a long while and do not know how many doses remain, obtain a new prescription and throw the old canister away.

Knowing Your Options

Dry Powder Inhalers (DPIs):

DPIs are breath-activated; the force of your breath activates the mechanism releasing the dry powder and carries the microscopic particles into your airways.

Some DPIs use only a few microscopic grains – so tiny you may not feel any sensation when inhaling the medication. This is normal.

Always store in a dry area or keep in a zipped plastic bag to prevent moisture and condensation.

Watch the dose counter or indicator; refill the prescription before running out of medication.

Nebulized Medications:

Nebulizers are used when a wet mist is preferred over dry aerosol or powder formulations.

Nebulizer units and replacement parts come in a variety of styles, sizes, and price ranges with features affecting portability, noise levels, and maintenance.

Always clean and replace nebulizer accessories and filters according to manufacturer's recommendations to ensure efficient delivery of medication to the airways.



*One example of a
Dry Powder Inhaler*



Answers to Your Questions

Other Conditions

Q: When I have asthma problems, I've usually got sinus problems, too. I don't want to use antibiotics or other medications, but I can't deal with the symptoms either. What do I do?

A: Asthma symptoms may be triggered by other health conditions that require medications during pregnancy, too. These include:

- Rhinitis
- Sinusitis
- Viral or bacterial respiratory infections
- Reflux disease (often referred to as heartburn)

Your physician or other healthcare provider may prescribe intranasal corticosteroids, antihistamines, antibiotics, or other medications with the goal of preventing the progression to asthma symptoms. Never use any nonprescription, prescription, or herbal medications without first discussing the decision with your physician.

You can reduce the number and doses of medications needed by avoiding or eliminating exposure to known allergens and irritants; using nasal irrigation with saline (salt water) to remove congestion, infection, allergens, and irritants from the nose; and using preservative-free saline sprays in the nose.

Exercise and Asthma During Pregnancy

Q: The only time I have asthma problems is when I laugh really hard or exercise. I can do yoga instead of aerobics, but I'd like to laugh without having to use medications. What can I do?

A: Exercise is an important component of self-care during and after pregnancy. If laughing and exercise provoke asthma symptoms, your airways are inflamed and irritated and your lung function may not be at optimal levels. Your asthma physician or other healthcare provider may prescribe use of one or more medications.

Start with a modest obstetrician-approved exercise program and work up slowly to a level that is right for you and your baby. Your exercise routine should include slow warm-up and cool-down periods.

Managing Asthma During Labor and Delivery

Q: I have asthma symptoms with exercise, so what can I expect will happen during labor and delivery?

A: Most expectant mothers with asthma delivering full-term babies experience no breathing problems during labor or delivery. Unless directed to do otherwise by your physician or other healthcare provider, do not discontinue use of any prescribed medication once labor begins. Your physician may direct you to bring a bronchodilator with you into the delivery or birthing room.

Depending on your health at the time you go into labor, your physician or other healthcare provider may give you an external supply of oxygen through a mask worn on your face and intravenous fluids to keep you well hydrated. Your physician will monitor contractions, your breathing and heart rate, the baby's heart rate, and other vital signs.

Should you begin having trouble breathing during labor or delivery, the physician or other healthcare provider can deliver inhaled medications through the same mask as used for oxygen and intravenous medications with the intravenous fluids.



Breastfeeding Your Baby

Q: Is it safe for the baby if I use medications while breastfeeding?

A: The same medications used during pregnancy are considered safe to use while breastfeeding your infant.

Postpartum Breathing

Q: Once my baby is born, will my asthma symptoms return to the way they were before I became pregnant?

A: Asthma symptoms are likely to change as your immune system and hormones readjust. However, there is no way to predict the future. Your body has carried and nourished a new life for nine months. Be good to yourself; get plenty of rest, eat freshly prepared food, carve out special moments just for you, and don't forget to see your obstetric and asthma physicians for follow-up care.

Immunotherapy and Vaccines

Q: Is it safe to continue taking my allergy shots during pregnancy?

A: Allergists often recommend immunotherapy (allergy shots) for patients who are unable to avoid or eliminate exposure to allergens and have not been able to control symptoms with medications. Given to adults and children on a scheduled basis as injections, immunotherapy may prevent allergy symptoms from developing.



Women who become pregnant while on immunotherapy may continue receiving injections throughout the pregnancy and while breastfeeding; however, it is not recommended to initiate immunotherapy during the pregnancy.

Pregnancy and the Flu Shot

Q: I have asthma and I am pregnant. I usually get an annual flu shot, but now that I'm pregnant, I'm not sure what to do.

A: An annual influenza vaccine (flu shot) is recommended for children and adults with asthma, including expectant mothers. During pregnancy, influenza can be particularly severe and challenging to treat, so immunization is important.

Important Tips to Remember:

- Learn the name(s) of your medications
- Use medications only as instructed
- Never take more or less medication than prescribed
- Talk to your physician or other healthcare provider about any medication concerns or unwanted side effects you experience



AANMA for Generations to Come

Throughout your pregnancy and beyond, Allergy & Asthma Network Mothers of Asthmatics (AANMA) is your advocate and award-winning resource for timely and accurate news. AANMA's uniquely qualified staff provides practical support services in both English and Spanish.

Learn More! Breathe Better!

Support AANMA's educational and outreach efforts with a donation today. We'll keep you informed and aware with our newsletter, *The MA Report*, and quarterly magazine, *Allergy & Asthma Today*. You'll receive email updates and notices, discounts on resources and medical devices, and toll free assistance from AANMA staff.

With your support, we're helping thousands of families breathe easier every day! Learn more about AANMA:

English and Español **800.878.4403**
www.breatherville.org

Ask Nurse Christy **866.277.2934**
This registered nurse answers questions Monday – Friday, 10 a.m. – 1:00 p.m. EST at this toll free number. Visit Nurse Christy at www.breatherville.org/medical-center.

AsthmaTracker®

Track medications, symptoms and triggers with this daily diary system — an AANMA exclusive. Learn more at www.breatherville.org/generalstore.



AANMA Recommends

*American Academy
of Allergy, Asthma
& Immunology*
414.272.6071
www.aaaai.org

*American College
of Allergy, Asthma
& Immunology*
847.427.1200
www.acaai.org

*American College
of Chest Physicians*
847.498.1400
www.chestnet.org

*Organization of
Teratogen Information
Services*
888.523.4847
www.otispregnancy.org



2751 Prosperity Avenue, Suite 150
Fairfax, Virginia 22031-4397

800.878.4403
www.breatherville.org

Breathing for Two

Download in English and Spanish
www.breatherville.org/medicalcenter

Single copies free
800.878.4403

Please call for pricing on bulk orders.

AANMA is a 501(c)(3) tax-exempt nonprofit organization.
Your donation is tax deductible to the extent allowed by law.